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THE ROLE OF THE CITEPA IN PROVIDING INFORMATION FOR BETTER PROTECTION OF THE ENVIRONMENT
[Connaître et informer pour mieux protéger l'environnement. Rôle du C.I.T.E.P.A.]

by

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[Interprofessional Technical Center for Research on Atmospheric Pollution]

Excerpt from la Revue Générale de Thermique, 2, rue des Tanneries, 75013 Paris

In 1960, in response to the increasing importance of atmospheric pollution problems, representatives of energy producers and the main industries involved met under the direction of Louis Armand to set up the Comité d'Action Technique contre la Pollution Atmosphérique (CATPA) [Committee for Technical Action against Atmospheric Pollution] under the auspices of the French Fuel and Energy Institute.

Mr. Chenot, then Minister of Public Health, was largely instrumental in the preparation by this committee of the basic law of August 2, 1961.

In 1961, this committee sent up an independent organization (Association, Law of 1901), the Interprofessional Technical Center for Research on

Pages 2 and 3 blank

Atmospheric Pollution, with the purpose of: "knowing, coordinating, instigating, performing and distributing studies, tests and scientific and technical research dealing with atmospheric pollution" by fixed sources and by industry.

After the death of its president, Mr. Louis Armand, the committee turned over all its activities to the CITEPA.

This center has played an extremely important part in combating pollution from fixed sources and from industrial waste over the last 12 years, whether by participating in studies and research on pollution prevention and regulation or by the creation and management of an information and documentation center.

Studies and Research

The studies performed have been directed primarily toward the development and standardization of methods of measurement, the best means of prevention, the dispersion of pollutants and their contents in the ambient air, and collection, processing and distribution of French and foreign information. These studies have been financed by energy distributors and by the unions of various industries, with the participation of the Ministry of Industrial and Scientific Development and the Ministry for Protection of Nature and the Environment.

The basis of all French regulation of industries is the Law of 1917. Permission to expand or set up a new industrial installation is given by the Prefect, who sets the conditions for installation and use to avoid any nuisance for the surrounding area. It was necessary to set maximum emission contents for each type of industry to allow for technical advances and to obtain uniform specifications.

These guidelines were set up by commissions representing the Industrial Environment Agency, the industries and the CITEPA, serving as a special advisor particularly responsible for documentation on foreign regulations. Subsequently, the rules were presented to the Higher Council of Commercial Establishments.

These actions resulted in the development and transmittal to the Prefect, of directives from 1970 to 1972 dealing with:

-- computation of the proper height of combustion furnace stacks to avoid excessive SO_2 concentrations in the ambient air;

-- similar height computations for stacks discharging particles;

-- the mode of installation and maximum emission content of

cement plants

domestic waste incineration plants

mineral agglomerating plants

foundries

steel converters

fixed sources.

A "branch contract" will be set up for old plants to allow study with each industrial union of the period after which purification of wastes could begin.

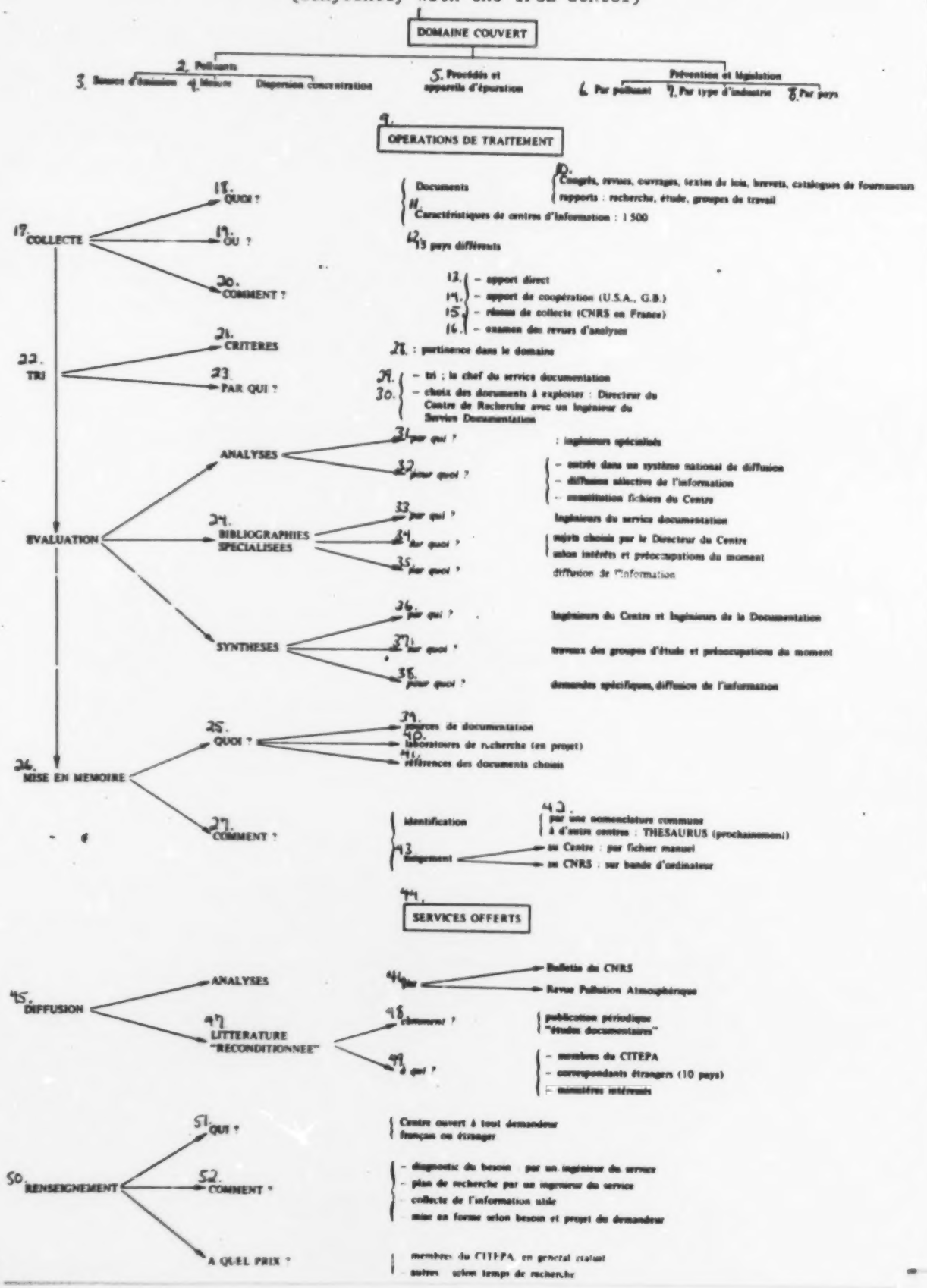
Two studies by the CITEPA commissioned by the Ministry of Industrial and Scientific Development and the Ministry of Environmental Protection permit an estimate of the economic results of these measures by, first, examining the capabilities of so-called "environmental" or "antipollution" industries in France, and, second, studying the cost of applying these rules of prevention during the Sixth Plan.

Documentation and Information

The Documentation Center of the CITEPA collects, selects, uses and distributes information from France and other countries to make this information available to all parties concerned with the problems of atmospheric pollution by fixed sources and industrial wastes.

Due to the nature of the field covered, there is a wide range of interested parties: industrialists, researchers, specialists, individuals responsible for the protection of living conditions. In addition, the documents in this field are numerous and vary widely as to content and origin. Consequently a series of operations is necessary to make this information available, requiring a system of methods and equipment. This system provides for updating of current knowledge and permits a response to precise information needs. By analogy with the American term for documentation centers operating on the same principles, we have termed this center the "Information Analysis Center." In addition, this center is part of the Thermal Documentation Center of the ICFE, permitting a link between information on energy production and information on protection of the atmosphere. The following diagram shows the resources of this center and the services which it offers.

CITEPA's Atmospheric Pollution Information and Analysis Center (conjointly with the IFCE Center)


DOMAINE COUVERT
2. Polluants
3. Source d'émission
4. Mesure
Dispersion concentration
5. Procédés et appareils d'épuration
Prévention et législation
6. Par polluant
7. Par type d'industrie
8. Par pays
9. OPERATIONS DE TRAITEMENT
10. Congrès, revues, ouvrages, textes de lois, brevets, catalogues de fournisseurs
rapports : recherche, étude, groupes de travail
Documents
11. Caractéristiques de centres d'information : 1 500
12. 13 pays différents
17. COLLECTE
18. QUOI ?
19. OU ?
20. COMMENT ?
13. - apport direct
14. - apport de coopération (U.S.A., G.B.)
15. - réseau de collecte (CNRS en France)
16. - examen des revues d'analyses
22. TRI
21. CRITERES
23. PAR QUI ?
24. : pertinence dans le domaine
29. - tri ; le chef du service documentation
30. - choix des documents à exploiter : Directeur du Centre de Recherche avec un Ingénieur du Service Documentation
EVALUATION
ANALYSES
31. par qui ?
: ingénieurs spécialisés
32. pour quoi ?
- entrée dans un système national de diffusion
- diffusion sélective de l'information
- constitution fichiers du Centre
34. BIBLIOGRAPHIES SPECIALISEES
33. par qui ?
Ingénieurs du service documentation
34. sur quoi ?
sujets choisis par le Directeur du Centre selon intérêts et préoccupations du moment
35. pour quoi ?
diffusion de l'information
SYNTHESES
36. par qui ?
Ingénieurs du Centre et Ingénieurs de la Documentation
37. sur quoi ?
travaux des groupes d'étude et préoccupations du moment
38. pour quoi ?
demandes spécifiques, diffusion de l'information
26. MISE EN MEMOIRE
25. QUOI ?
39. sources de documentation
40. laboratoires de recherche (en projet)
41. références des documents choisis
27. COMMENT ?
identification
43. par une nomenclature commune à d'autre centres : THESAURUS (prochainement)
rangement
43. au Centre : par fichier manuel
au CNRS : sur bande d'ordinateur
44. SERVICES OFFERTS
45. DIFFUSION
ANALYSES
44. par
Bulletin du CNRS
Revue Pollution Atmosphérique
47. LITTERATURE "RECONDITIONNEE"
48. comment ?
publication périodique "études documentaires"
49. à qui ?
- membres du CITEPA
- correspondants étrangers (10 pays)
- ministères intéressés
50. RENSEIGNEMENT
51. QUI ?
Centre ouvert à tout demandeur français ou étranger
52. COMMENT ?
- diagnostic du besoin par un ingénieur du service
- plan de recherche par un ingénieur du service
- collecte de l'information utile
- mise en forme selon besoin et projet du demandeur
A QUEL PRIX ?
membres du CITEPA, en général gratuit
autres : selon temps de recherche

Key to p. 8

1. Field covered
2. Pollutants
3. Emission source
4. Measurements
5. Purification processes and devices
6. By pollutant
7. By type of industry
8. By country
9. Processing operations
10. Conferences, journals, books, laws, patents, suppliers' catalogues; reports: research, study, work groups
11. Characteristics of information centers: 1500
12. Fifteen countries
13. Direct contribution
14. Cooperative contribution (U.S., G.B.)
15. Collection network (CNRS in France)
16. Examination of analytical journals
17. Collection
18. What
19. Where
20. How
21. Criteria
22. Sorting
23. By whom
24. Specialized bibliographies
25. What
26. Storing
27. How
28. Pertinence to field
29. Sorting; head of documentation service
30. Choice of documents to be used: Director of Research Centers with an engineer of the Documentation Service
31. By whom: specialized engineers
32. For whom: input into a national distribution system; limited distribution; for Center files
33. By whom: engineers of documentation service
34. On what subject: subjects chosen by the Director of the Center depending on current interests and concerns
35. By what: distribution of information
36. By whom: Engineers of the Center and Engineers of the Documentation Service
37. On what subject: research by work groups and current concerns
38. For what purpose: specific requests, distribution of information
39. Documentation sources
40. Research laboratories (engaged in projects)
41. References of documents selected
42. By a nomenclature also used by other centers: thesaurus (forthcoming)
43. Sequencing: at the center, by manual file; at the CNRS, on computer tape
44. Services offered
45. Distribution

46. By: CNRS bulletin, Atmospheric Pollution Review
47. "Reconditioned" literature
48. How: periodic publication of "documentary studies"
49. By whom: CITEPA members; foreign correspondents (10 countries); the agencies concerned
50. Information
51. Who: center open to all requestors, French or foreign
52. How: determination of needs by an engineer of the service; research plan by an engineer of the service; collection of useful information; release of information in a form suited to the needs and projects of the requestor
53. Cost: generally free of charge to CITEPA members; for others, depending on research time.

Section 885: Nuisances

Scientific Advisors:
- Solid Waste Documentation Center (solid wastes)
- Industrial Environment Training and Documentation Center (noise, vibrations, nuisance law)
- Interprofessional Technical Center for Study of Atmospheric Pollution (Documentation Service in common with the French Institute of Fuels and Energy) (atmospheric pollution)
- R. Colas (water and water purification)
- J. Pujolle (noise, vibrations)

Editor: J.-P. Dubois

Editing committee:
- J.-P. Dubois (CNRS)
- E. Vivié (CFDE)

A. Water and Water Purification

Water economy, water sources: see Section 226.
Hydrobiology: see Sections 340, 360 and 370.
Supplying of water: see Section 890.

01. General Considerations

02. Production and Preparation of Potable Water

- A. General considerations
- B. Treatment of water for consumption
  - 01. Conventional treatments
    - A. Flocculation, decantation
    - B. Filtration
    - C. Disinfection, sterilization
  - 02. Special treatments
    - A. Softening
    - B. Fluoridation
    - C. Finishing treatments
- C. Water for swimming pools
- D. Recycling
- E. Desalination

03. Water for Industrial Uses

- A. General considerations
- B. Scientific studies
  - 01. Analyses
  - 02. Effect on materials (corrosivity, aggressiveness)
  - 03. Miscellaneous

C. Technology
    01. Various treatments, combating corrosion and scale
        Desalination: see "Production and preparation of potable water"
        A. Boiler water
        B. Water for various industrial uses
    02. Recyling with or without regeneration

04. Used Water and Pollution

A. General considerations
B. Economic aspects
C. Scientific studies
    01. Physicochemical or biological phenomena
    02. Analysis (physicochemical, bacteriological and virological characteristics)
        A. Method and equipment
        B. Results of measurement
    03. Pollution of surface and underground water
        Effects on flora, fauna and human populations
        A. Underground water
        B. Running water
        C. Water in lakes, ponds, dams, reservoirs, etc.
        D. Coastal and estuary waters
        E. Marine water
    04. Specific cases
        A. Detergents
        B. Pesticides
        C. Radioactive residues
        D. Petroleum products
        E. Thermal pollution
        F. Toxic products (heavy metals, etc.)
        G. Nitrates
        H. Various products
        I. Bacteria and viruses
D. Purification of used water
    01. General
    02. Physicochemical (primary) purification: decantation, coagulation, filtration, flotation, etc.
    03. Biological (secondary) purification
    04. Tertiary purification and polishing treatment
    05. Sludge digestion and treatment
    06. Purification: construction of treatment plants and sewers
    07. Purification of residual industrial water: destruction, incineration, etc.
    08. Miscellaneous
E. Discharge of effluents into the natural environment and their possible use
    01. General considerations
    02. Discharge into continental water (rivers, lakes, etc.)
    03. Discharge into the ground
    04. Spreading, agriculture use of effluents

06. Self-purification and artificial aeration of the receptive medium
Recycling: see "Production and preparation of potable water" and "Water for industrial uses"

F. Miscellaneous

B. Solid Wastes

01. General Considerations

A. Problem of wastes: general considerations
B. General economy (organization, planning, management of territory)
C. Origin and characteristics of waste
D. Collection and transport
E. Treatment installations
  01. General considerations
  02. Discharge
  03. Composting
  04. Incineration
  05. Miscellaneous
F. Recovery
G. Uncontrolled discharges (wilderness wastes, etc.)

02. Urban Wastes

A. Domestic waste
  01. General considerations
  02. Characteristics
  03. Collection and transport
  04. Treatment processes
  05. Recovery
B. Large-size waste materials
C. Commercial wastes
D. Community wastes
E. Miscellaneous

03. Wastes from Agriculture and the Agricultural and Food Industries (Breeding Farms, Slaughterhouses, Suger Plants, Canneries, etc.)

04. Industrial Wastes

A. General considerations
B. Extraction industries
C. General mechanics
D. Metallurgy
E. Chemical industry
F. Paper and cardboard industry
G. Construction and public works industry
H. Wastes from other industries

05. Specific Wastes

A. Discarded vehicles
B. Packaging
C. Construction wastes (excavation materials, debris, etc.)
D. Sludge. See: "Water and water purification" ("Used water and pollution," "Sludge digestion and treatment")
E. Used oil
F. Organic wastes
G. Miscellaneous

06. Specific Study of the Constituents of Waste

A. Paper, cardboard, wood
B. Plastic
C. Rubber
D. Glass, ceramics
E. Scrap iron
F. Non-ferrous metals
G. Textiles
H. Miscellaneous

C. Atmospheric Pollution

01. General Considerations

A. General considerations
B. Conferences
C. Public information and organization of documents
D. Furnishing of information
E. Terminology
F. Specialized centers; research
G. General economic studies

02. Combating Strategy. Standardization. Results of Measurement Studies

A. General considerations
B. Studies for a given country
    01. France
    02. Common Market countries aside from France (FRG, Belgium, Luxenbourg, Italy, the Netherlands and Great Britain)
    03. The rest of Europe and the West
    04. Soviet Union and other Eastern countries
    05. U.S. and other American countries
    06. Japan and Asian countries
    07. Other countries

03. Pollutants and their Effects. See also Sections 330, 370 and 380

A. General considerations
B. Meteorological influence (climate, rain, snow, etc.)

C. Effects on man
D. Effects on animals and plants
E. Effects on materials
F. Air quality criteria. Standards
G. Economic studies
H. Studies on a given pollutant (sources, characteristics, effects, tandards)
    01. Dust, aerosols
    02. Sulfur compcunds
    03. Nitrogen compounds
    04. Other oxidants (ozone, fluoride, chlorine, peroxides, etc.)
    05. Carbon monoxide and dioxide
    06. Lead, carbon disulfide
    07. Hydrocarbons, organic compounds
    08. Pesticides
    09. Radioactive pollutants
    10. Other pollutants
I. Interaction of pollutants in the atmosphere

04. Diffusion. Stacks

A. General considerations
B. Study of diffusion
    01. General considerations
    02. Meteorological factors
    03. Theoretical study (single and multiple sources, urban areas)
    04. Experimental study (full-scale and simulated)
C. Methods for computing stack heights
D. Design and description of stack installations

05. Measurement of Pollutants

A. General considerations
B. Sampling
    01. General considerations
    02. Sampling on emission
    03. Sampling in the ambient air
C. Measurement of solid particles in aerosols
    01. General considerations
    02. Measurement on emission
    03. Measurement in the ambient air
    04. Measurement of fallout to the ground
    05. Analysis of dust, granulometry
D. Measurement of gases and vapors
    01. General considerations
    02. Sulfur compounds
    03. Nitrogen compounds
    04. Other oxidants (ozone, fluoride, chlorine, peroxides, etc.)
    05. Carbon monoxide and dioxide
    06. Lead, carbon disulfide
    07. Hydrogen carbons, organic compounds

08. Pesticides
09. Radioactive pollutants
10. Other pollutants

E. Measurement of vehicle exhaust gases
F. Measurement of odors
G. Organization of systematic measurement studies

06. Sources of Pollution and Means of Prevention. Content in Ambient Air

A. General considerations (sources, prevention, economic studies)
B. Natural pollution (marine spray, extraterrestrial dust, animal, vegetable and microbial pollution, etc.)
C. Pollution due to combustion
01. General considerations
02. Fuels (characteristics, smokeless fuels, desulfuration)
03. Additives
04. Combustion studies. Pollutant formation
05. Burners and boilers
06. Furnaces and incinerators
07. Heating (domestic, urban, industrial)
08. Thermal plants
D. Radioactive pollution
E. Pollution specific to a type of device (cooling tower, drier, etc.)
F. Pollution by wastes from various industries
01. General considerations
Thermal plants: see "Pollution due to combustion"
02. Pollution specific to a given product (solvents, etc.)
03. Coke smelting plants
04. Agricultural and food industries. Breeding
05. Extraction industry, coal mining and processing
06. Chemical and parachemical industry
07. Construction materials industries (cement, lime, plaster and brick works). Ceramics. Glassmaking.
08. Refineries
09. Paper mills
10. Iron metallurgy, metallurgy, foundries.
11. Other industries
G. Pollution due to transportation
01. Pollution by vehicles
A. General considerations
B. Combustion in engines and formation of pollutants
1. General considerations
2. Diesel engines
3. Explosion engines
4. Various engines (turbines, rotary piston engines, etc.)
C. Prevention of pollution
1. General considerations
2. Modifications of fuel
3. Modification and improvement of engines
4. Antipollution devices
5. Antipollution engines (electric motors, steam engines, battery motors, etc.)

02. Pollution due to railways, navigation and aviation

07. Treatment of Effluents

A. General considerations. Economic studies. Combined treatment
B. Dedusting
  01. General considerations (capture, test, efficiency, choice, economic studies)
  02. Mechanical dedusters
  03. Electrical dedusters
  04. Wet dedusters
  05. Porous layer dedusters (air intake filters, etc.)
  06. Ultrasonic dedusters
C. Treatment of gaseous pollutants and odors
  01. General considerations. Economic studies
  02. Oxidation treatment (direct and catalytic)
  03. Treatment by absorption
  04. Treatment by adsorption
  05. Desulfuration of gaseous wastes
  06. Treatment of nitrogen compounds
  07. Treatment of carbon compounds
  08. Treatment of hydrocarbons and organic compounds
  09. Treatment of other pollutants
  10. Devesiculators (treatment of droplets and liquid aerosols)

D. Noise, Vibrations
Theoretical Acoustics: see Section 130

01. Noise

A. General considerations
B. Sources of noise
  01. General considerations
  02. Buildings
    A. Public buildings
    B. Inside noises
  03. Industry
    A. Noise in industrial areas
    B. Equipment noise
  04. Transport
    A. Air traffic
      1. Airports
      2. Aircraft
    B. Automobile traffic
      1. Cities
      2. Highways
    C. Railway traffic
    D. Miscellaneous
05. Miscellaneous

C. Measurement
  01. General considerations
  02. Methodology
  03. Processing of results
  04. Standardization
D. Effects
  01. General considerations
  02. Acceptable thresholds
  03. Effects on man
    A. Hearing
    B. Miscellaneous
  04. Experimentation on animals
E. Abatement
  01. General considerations
  02. Buildings
    A. Machines in public buildings
    B. Soundproofing of buildings
  03. Soundproofing of industrial equipment
  04. Transport
    A. Air traffic
      1. Abatement of propulsion noise
      2. Protection around airports
    B. Automobile traffic
      1. Abatement of propulsion noise
      2. External protection
    C. Railway traffic
  05. Absorbing materials
  06. Individual protection

02. Infrasounds and Ultrasounds

03. Other Vibrations

A. General considerations
B. Sources of vibration
  01. General considerations
  02. Buildings
  03. Industry
  04. Transport
  05. Miscellaneous
C. Measurement
  01. General considerations
  02. Methodology
  03. Standardization
D. Effects
  01. General considerations
  02. Acceptable thresholds
  03. Effects on man. See also Sections 365 and 390.
  04. Experimentation on animals
  05. Effects on buildings
  06. Effects on equipment

E. Abatement
01. General considerations
02. Antivibrational processes

E. Nuisance Law

01. Questions on a Specific Nuisance

A. Atmospheric pollution
B. Pollution of inland waters
C. Pollution of the sea
D. Radioactivity
E. Urban and industrial wastes
F. Noise and vibrations

02. Questions Dealing with a Given Activity or Environment

A. Protection of nature and the environment in general
B. Land management, urban expansion, construction
C. Environment and activities of industry, commerce, or self-employed workers
D. Environment and activities not discussed elsewhere

03. Non-specific Legal Questions on Pollution Law

A. General legal concepts
B. Administrative law
C. Penal law
D. Civil law
E. Economic, commercial and fiscal law
F. International law and international organizations
G. Foreign law
H. Legislation and regulations not discussed elsewhere
I. Public services and government organizations
J. Private organizations

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Research Triangle Park, North Carolina 27711

Translations Section

11/11/75

Editor, "Revue Generale de Thermique"
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R.G.T.
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N° 6

Dear Editor,

The U.S. Environmental Protection Agency has translated material from your publication, "Revue Generale de Thermique".

We request permission for the National Technical Information Service to store and distribute copies of the English text of this material. The Service, a non-profit agency of the United States Government, is the central source for documents produced by government-sponsored research. The holdings of the Service are indexed in printed catalogs and computerized bibliographic data files which are made available to the scientific and technological community at large, public as well as government.

It would be most helpful for the dissemination of scientific information if you could grant continuing permission to deposit with the National Technical Information Service any translations which we might make from your publication in the future. If this is not possible, we request permission to deposit the following specific articles:

Jean-Paul Detrie : "Connaitre et informer pour mieux proteger l'environement. Role du C.I.T.E.P.A."

Sincerely yours,
Libby Smith

Libby Smith
Chief, Translations Section

Dear Sirs,

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- From January 1976 we are including in our Revue Générale de Thermique a 1300 words condense in english of each paper.

Glad to be helpful

M. Poirier

Mme POIRIER
Directeur adjoint